

CA Fire Services Task Force on Climate Impacts

Meeting Minutes

February 10, 2016

Present: Matthew Beevers (California National Guard), Danjel Bout (Cal OES), Whitney Bray (CalFIRE), Jeff Bowman (Orange County Fire Authority), Ashley Conrad-Saydah (Cal EPA), Christina Curry (Cal OES), Greg Farley (California Department of Water Resources), Brian Fennesy (San Diego Fire-Rescue), Mark Ghilarducci (Cal OES), Richard Halsey (California Chaparral Institute), Tracey Hansen (California Fire Chiefs Association), Mark Hartwig (California Metropolitan Fire Chiefs Association), Brandon Hill (Cal OES), Tonya Hoover (Office of the California State Fire Marshal), Matthew Johnson (National Park Service), Robert Griffith (Fire and Aviation Management USFS-Pacific SW Region), Jose Lara (Cal OES), Mike Lopez (CalFIRE), Mark Lorenzen, (Ventura County Fire Protection District), Sam Marouk (Branch of Fire and Aviation BLM-CA State Office), Paul McGinnis (Cal OES), Ernie Mitchell (U.S. Fire Administration), Lori Newquist (Cal OES), Daryl Osby (FireSCOPE), Lou Paulson (California Professional Firefighters), Dave Roberts (El Dorado Hills Fire Department), Reggie Salvador (CalOES), Michael Schroeder (Orange County Fire), Alex Syphard (Conservation Biology Institute), Dave Teter (CalFIRE), Joey Wall (California Natural Resources Agency), Megan Walton (Cal OES), Jason Weber (Marin County Fire Department), Brian Woodbeck (Cal OES), Kim Zagaris (Cal OES)

Next meeting: May 25, 2016 (Wednesday)
10:00am -3:30pm, California State Capitol, Governor's Council Room

I. Welcome & Introductions (*Mark Ghilarducci, Cal OES*)

- Review/Approval of 10/13/15 Minutes
 - One change to the minutes before approval. Page five, second paragraph, acronym change to CFAA. Task Force approved the minutes.
- Signing of Task Force Charter
 - Charter is moved and seconded.
- Update on Budget/Initiatives for Cal OES and Cal FIRE
 - The budget has an impact and tangential correlation to this body, including the initiatives that we are looking at through the Blue Ribbon Commission that we are chipping away at. Issues including Drought, El Nino, and Tree Mortality all need resources to respond accordingly as well as planning and preparing for potential disasters. CalFire and CNRA have been addressing the need for resources to pinpoint gaps and requests appropriate resources. There is 20 million dollars in Cal OES budgets for Type III Fire Engines. Additionally, there have been 15 additional replacements and 35 additional engine expansions. The Governor has been supportive of these objectives and they were pushed to the budget to address the need for resources.

- The Valley, Butte, Rim and King Fire led to a lot of action. This led the Governor and First Lady to see the need for and address first hand help with these growing fire disasters. Enhancements have also been made through the budget to further augment Fire and Rescue capacity. Also, joint initiatives including NIX are working hard to upgrade to 6.0. Australia MOU to use cloud service and collaboration to support and have a round the clock capability for fire season. One reliable and robust system that we can count on will be a legacy program that we can all be plugged into. Interoperability is key in this sense and a big benefit was that FEMA started using the NIX to determine FMAG's in a rapid fashion. This is a huge deal for us to be able to accomplish.
- FEMA approved mitigation to be plugged into FMAG. If you get an FMAG, 20% of the total FMAG value can be put back into fire activity like watershed and restoration as well as other protective measures. We now have an additional funding source that we can tie in to the task force. This is moving from a pilot to a full scale program.
- Increased support for the reimbursement side, as well as fleet support.
- CFA progress on reimbursement with our federal partners?

Tanya Hoover - We have issued an audit report. More was on an issue of land management. Both our agencies are looking at these findings, but there have been bits and pieces talked about to take harder line to uphold the signed agreement. Questions whether or not Cal OES can represent all local governments rather than federal working with local governments. Meetings with the Forest Service have taken place. They want to be clear that they don't want to disrupt the system. We need to continue to work with our partners.

Kim Zagaris - 21st of January there was a bump in the road. Talking with chief LaGarza and others, we are pulling back a bit but there is a game plan. Good conversations have been taking place, and we believe it will be moving forward.

Dave Teter - We are working collaboratively when it comes to the reciprocal fire protection act and how it has been interpreted, possibly revising it and having clean up language to address these issues. Getting federal regulation revised has happened 3 times since 08. CFA meeting will walk away with good intentions.

Tanya Hoover - This is a huge issue for us and we know this body has an ear. Thank you for the update and we look forward to working on this.

Ashley Conrad - In terms of forest health there is 150 million dollars within budget to cut back on greenhouse gas reductions.

Director Ghilarducci - Immediate resources to address issues like tree mortality. We are identifying projects to go in on private and public land. The challenge is figuring out how you dispose of these trees after a significant wildfire season? Enhancing biomass capabilities, to chipping and putting on freeways, all options are on the table to address the tree mortality issue.

Dave Teter - Under the header of forest health there is 180 million total dollars for greenhouse gas emissions as well as 30 positions to stand up program within the Governor's EO. Legacy programs for climate health and resiliency are also important. Out of \$140 million, \$5 million will go to Conservation

Core. We are supporting the Governor and the administration to address the impacts of the drought. \$77 million is allocated to continue emergency drought operations. \$7.5 million is allocated as direct proportional funding as well and maintaining 5 positions. Emergency Command Center staffing model since early 1980's will give us a boost to process emergency 911 calls. It will also bring Cal Fire as an agency into the era of automatic vehicle location and automated data. This will lead to more efficient use for the response mechanism, as well as safety and accountability. One example is when a firefighter during the Butte Fire lost radio communications for 35 minutes, which is a very long time in those circumstances. Informational technology and security staffing as well as individual fire stations IT are important in fire season. July 1st will be inked and continue to move forward in future goals.

Director Ghilarducci - AVL piece is huge and was a heavy lift. This serves to bring us into the 21st century.

II. Governor's Tree Mortality Task Force Update (*Glenn Barley, Cal FIRE*)

Tree Mortality Task Force Leader Glenn Barley- We are focusing on 6 counties, and approximately 25 million trees. There are 78 entities on the task force as well as 8 working groups who are addressing this issue.

- Intent of the task force
 - To implement the Governors proclamation
 - Work happens at the local level
 - Statewide ta
 - Taskforce supports local taskforces by:
 - Identifying high hazard zones
 - Work to remove trees HHZ
 - Cal Fire to ID potential storage sites
 - Cal Fire to distribute equipment across HHZ's
 - Address Regulatory impediments and work to resolve them
 - Maintain develop and expand the use of Bioenergy using feedstock from HHZ's
 - Work to identify and promote wood markets (RELIES ON LOCAL ACTIVITY)
- Tree Mortality Task Force IAP breakdown
- Action Items
 - High Hazard Zone Validation
 - Prevailing Wage Determination
 - CDAA Funding
 - Outlet for Trees Being Cut
 - Bioenergy contract extensions
 - Market development
 - Sawmills full
 - Storage sites
 - Assistance to Private Landowners
 - Lots of land where trees are on private rural lots. They are in between lots. Gets expensive 500-1500 dollars per tree to remove. 30 million dead trees, 500 dollars a tree. 15 billion dollars to remove all trees. Mortality is occurring in watershed, long term is significant for the water use for our State.
- Equipment being purchased
 - Implications for Fire Protection

- Tree Mortality Effect on Fire Behavior
 - Short term, Red Trees, Pine Needles
 - Midterm, Standing dead, burnout and failure
 - Long term, downed heavy fuels
- Year 7 is the failure rate exponential increase point
- Heart of the infestation has been in southern Kern Counties. Southern California experienced this in the early 2000's. We are seeing increased in Calaveras and Amador Counties, as well as the Shasta trinity counties. Heavy mortality in Monterey pine, but it stands isolated.
- Task force is for drought related mortality, but right now we are working with local infestations.
- We are seeing more hot and and dryer years. More bark beetles, and dying trees. Changing forest health and monitoring on how forests are changing as years go by. Resources needed to think decades out so that policies can drive continuity of species.
- Dir. Congressman Lewis was able to get an earmark to get money to address San Bernardino mountains. We've been talking with Feinstein and Boxer to attempt to address their engagement in this process. A lot of land is owned by federal agencies. There has to be an effort where we collaborate and move forward.
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III. Fire Recovery Update (*Mark Ghilarducci, Cal OES*)

- From 2014 to 2015 our state has seen a 38% increase in the number of wildfires, with the grand total for last year standing at 6,335 fires.
- The Valley Fire burned a total of 76,067 acres and destroyed over 1,900 structures (1,280 homes). It is California's 3rd most devastating wildfire in recorded history.
- The Butte Fire burned a total of 70,868 acres and destroyed over 800 structures (475 homes). It is California's 7th worst wildfire in history.
- The Recovery process is always the most complex step in any given disaster.
- On September 21, 2015, Governor Brown sent letters to POTUS, through Robert Fenton, Regional Administrator, FEMA, requesting a Presidential Major Disaster Declaration in California for the Valley and Butte fires. This declaration released federal aid to the State through various individual assistance programs including:
 - Individual and Households Program
 - Transitional Sheltering Assistance
 - Disaster Care Management
 - Disaster Unemployment Assistance
 - Crisis Counseling
 - Disaster Legal Services
 - Small Business Administration Disaster Loans
 - US Department of Agriculture Emergency Loans
- Individual Assistance experienced 3,843 total registrations and over \$7.6 million disbursed for housing assistance to survivors of the Valley and Butte Fires.
- US Small Business Administration approved more than \$21.9 million in loans.
- Multiple state agencies worked in conjunction with FEMA, SBA and the American Red Cross to set up "one-stop-shop" Disaster Recovery Centers for survivors to begin to rebuild their lives. Cal OES coordinated and oversaw the operations of these agencies which included: The

Employment Development Department, Department of Insurance, Franchise Tax Board, and Department of Motor Vehicles, among others.

- Over 4,500 total visits were recorded to the three Disaster Recovery Centers in Lake and Calaveras Counties.
- Public Assistance was also a key component of the efforts to recovery from these devastating fires. Thus far over \$196 million has been obligated by FEMA for 22 different projects with 57 different subrecipients. This includes reimbursement for response costs, such as fire and law enforcement personnel, and EOC operations. This also covers permanent restoration of damaged or destroyed infrastructure.
- As a part of the Presidential disaster designation, California will also receive Hazard Mitigation dollars for projects that lessen risk in future events.
- The Joint Field Office, staffed by FEMA and Cal OES since the beginning of October 2015, is operating at a limited capacity through the rest of this month, after which recovery operations and support will continue at our regular facilities for the duration.
- Debris removal was a 200-300 million dollar operation. All properties have been cleared. We receive 20% of all costs back to the State. After it's all said and done 50-60 million dollars in hazard mitigation projects to reduce the impact of future disasters.

Kim Zagaris - The amount of resources and augmented aircraft during response to the fires was unparalleled.

Dave Teeter - Aerial assets are key to suppress the fire activity. Ludacris amounts of acreage and speed of spread. More than 90 percent of outcast creating spot fires. Sometimes you just have to let the big dog eat. 99 percent of resources were committed to ensuring evacuation. This is the new norm and it is the message we need to key on. What does the new meaning of surge capacity mean?

Kim Zagaris - There is a growing concern with our ability to protect the public and protect our folks who are on the front lines. We came very close on the Butte fire to an even wider disaster; we actually did lose an engine.

Dave Teeter - We are seeing longer and drier days. There have already been almost 70 wildfires since January 1, 2016. It's easy to overshadow the over 6,000 wildfires that were caught.

Jeff Bowman - There is a clear impact of limited resources. If this is the new norm we won't be able to keep at the same pace.

Dave Teeter - There is a study that may be done for prevention and fuel management. How do we get our communities involved in this issue? This will last throughout the remainder of our careers. Mass fatalities are the last thing any of us want to experience. Discussing impact on local government is important and two-fold, which also touches upon long term equipment capabilities.

Mark Hartwig - We've made decision either to send or not send resources. We are asking so much more of locals today than we ever have. Covering a fair reimbursement at a 1.9 percent rate.

Jeff Bowman - Generation of huge overtime piece that I think we as a fire service are failing to make public.

Jeff Bowman – Some of the problems that we face are that 5 of our 9 counties are currently being exhausted. If we want to have the best possible defense it boils down to weight and speed of attack. There are also 5 departments that will face cutbacks. A discussion on what we do right now and get more resources on the road to hit the fire's fast and hard. No one wants to jeopardize their own communities in a major deficit.

Kim Zagaris - create an incentive at the Legislative level

Jason - losing insurance at the local level. Issues with All-State.

Jeff Bowman - Tough for local government to handle all these issues seeing as this is the first line of defense on all fires. roof is in the pudding- defensible space and pre construction phases are key in not losing structures. Incentives are key and looking at cost to mitigate fire hazards before they happen.

Director Ghilarducci- There is no silver bullet but there is a conversation that needs to take place at the local level, looking at building standards and enhance the capability at the local level.

IV. Update on the State Post Fire Watershed Emergency Response Team

Michael Sabbaghian- Cal Fire led the process in Watershed ER Teams and evaluating the geological hazards that resulted from the fires. The team identified hazards and steps that should be taken to mitigate these hazards. Once you ID the sites, you must take action on it or it creates a liability. County, state and federal resources were brought together complete a review and ID potential solutions. Based on this, we began dealing with separate sites and began to take action. National Weather service and debris removal sites were key.

Watershed clearinghouse- GIS team pulled together to ID potential impacts of debris flow and additional water locations. The watershed not only is a problem now, but it tends to be an issue 3-5 years down the line after a disaster. Water quality was also a key issue. Testing was being done to minimize contaminants that might be getting into the reservoir. Measures were taken in the streams to this effect. Additional testing was taken.

Key tasks beside the water issues related to new ways of identifying hazards. CalTrans is working with the University in Arkansas to look at better modeling technology. You can model over and over, but it will change as the debris flow moves. WA collaborated with CA in producing new procedures as far as our efforts go.

Director Ghilarducci - What we learn from post-watershed issues. These particular fires burn so dramatically that it can really damage the Watershed. It also exacerbates the drought. Mudslides are also a huge issue to this affect off of certain burn scars. The I-5 incident is one example of mudslides creating a huge issue. Working and thinking on how to address burn scars, and mitigate some of these impacts.

V. White House Update (*Ernie Mitchell, U.S. Fire Administration*)

Ernie Mitchell - How do we mitigate flood damage to mitigate against wildfires? FEMA is implementing building standards for flood risk. Minimizing repetitive loss is key. There is recognition that planning is

very important but there is also reluctance because at the federal level, the land use policies occur. We need to better align resources to get the message out and utilize the science that is available as well as FMAG ideas on land use. We are pushing for residential sprinklers and CA is ahead of the game but, the rest of country is not. I find that there are a lot of residents that are unaware of residential sprinklers. Fires and watershed exacerbate flooding.

Kim Zagaris – There were 7 Kern fire chiefs at the meeting and 9 total CA representatives at the federal meeting

VI. State Climate Adaptation Update (Joey Wall, CNRA)

(Displays a graphic of climate impact from 2050 to 2100 relating to snow pack).

Statewide Adaptation Planning- 2008 EO Governor Schwarzenegger- Inevitable climate impacts gave way to the 2009 Adaptation Strategy updated in 2015 to Safeguarding California. This looks at agriculture, forestry, emergency management. 2014 plan is there were high policy recommendations made. EO B-30-15 in April 2015 is an example of this and the adaptation framework is still being flushed out since this EO was put out. The Governor's EO mandated state agencies to a full lifecycle and taking into account all climate impacts. OPR is currently assembling the a technical advisory group that will go over a full life cycle cost accounting.

AB 1482- adds detail into the EO. AB 1482 pivots towards a regional approach to adaptation planning instead of looking at various sectors at the state level.

SB 246- updating the adaptation planning guide. Adaptation Planning Guide integrating update to local hazard mitigation plans through Cal OES.

SB 379- Requires, upon the next revision of a local hazard mitigation plan, the element to be reviewed and updated as necessary to address climate adaptation and resiliency strategies applicable to that city or county. Requires the update to include a set of goals, policies, and objectives based on the vulnerability assessment identifying the risks that climate change poses to the local jurisdiction and the at risk geographic areas and specified information from federal, state, regional, and local agencies.

Director Ghilarducci - Updates in building codes and challenges in urban/wildland interface and land use planning. This legislation is an avenue that ties into a larger initiative that we (task force) can make change through.

VII. National Disaster Resilience Competition (Louise Bedsworth, OPR)

Director Ghilarducci - Guides the conversation from leg update to resilience competition from Louise Bedsworth via telephone.

Louise Bedsworth – A large outcome of efforts around the National Disaster Resilience Competition (NDRC) was the 1 billion dollar competition to federal disasters in 2011, 12, 13. There were a total of 67 eligible jurisdictions and 48 states, as well as 19 counties. This was the first time the federal government presented money through a competitive framework.

Fiscal requirements- California had three qualifying disasters that made us eligible for the competition, but Rim Fire was selected because of the scale and magnitude of the event, also seeing as it is tied to drought issues.

Phase one was a concept and phase two saw actual funding. Watershed health and investments is focused on activities to restore land mass. The Community on Watershed Resiliency program was built around three interconnected areas. The first was investment in forest and watershed health.

Forest and Watershed Health-

Invest in activities to restore forest and watershed health in the burned areas, including biomass removal, reforestation, restoration, and development of a system of strategic fuel breaks.

Bioenergy and Wood Products Campus-

Support the development of appropriately-scaled facilities to provide economically-beneficial end uses for forest residues, including wood products, electricity generation, and combined heating and cooling.

Community Resilience Centers-

Design and construct multi-use facilities for use during a disaster, but also to support community services, educational programs, job training, and facilities for the California Conservation Corps.

117 million total dollars requested by State to the Housing and Urban Development Department (HUDD) to implement activities in each of the three areas described above. This is a big undertaking, but exciting because it aligns with a lot of our goals around resilience, watershed improvement, and community development.

Director Ghilarducci - What is the potential for funding like this for other counties throughout the state?

Louise Bedsworth- Informing our own funding allocations is important and HUDD will be looking at this as well as FEMA to do more resilience building in awards for recovering. This was the first time the funding was under a competitive approach. CNRA resources agency will have all information on the website available to the task force within two weeks.

Director Ghilarducci. - Participation on updating these documents and making it relevant as possible is important at a local level to involve the whole community process.

Question - What is the chart modeled after in the Cal Adapt tool?

Joey Wall - Models are after the UN recommendations as well as Cal Berkley and other universities in California. Coastal impact is more prominent. Local impacts must be understood. Convergence on these models is normal, and the projections are on point.

VIII.The Missing Emphasis: location, home flammability, and responsible defensible space within the context of increasing population and climate change (*Richard Halsey and Dr. Alexandra Syphard, CA Chaparral Institute*)

We are living in a changing fire-prone environment. The amount of misconception after the Cedar Fire was massive. The most important issue is how we protect life and property. Tells story about a resident that successfully battled homeowner's association to replace wood shake roof with Class A. Home was one of few in neighborhood surviving Cedar Fire. We live in a fire prone environment and it has always been that way. 1889 was one of the biggest fires we saw, even bigger than the Cedar Fire well. There will never be enough resources to protect every single home during major fires, like the ones we have seen as of late.

The Natural Environment

- California forests and chaparral have different fire regimes

The Human Environment

- Most fires are caused by humans. Southern California sees 90% or more of human induced fires. Fires are more destructive today because of exponential population growth and urban sprawl that places homes within dangerous fire sheds.
- Windblown embers that traveled one mile or more were the biggest threat to homes in the Witch Creek Wildfire. There were few, if any, reports of homes burned as a result of direct contact with flames
- After examining 687, 869 homes, no additional structure protection was provided by clearing beyond 100 feet, even on steep slopes.
- Defensible space is critical, but there is no additional benefit beyond 100 feet.

Order of biggest risk factors for loss

- Low to intermediate housing density ($<54/\text{km}^2$)
- Home older than 30 years
 - Window frame material
 - Single or dual window panes
 - Roofing material
 - Exterior construction
- Vegetation immediately around home, overhanging or touching.
 - Leaf litter
 - Also important—road access, slope and aspect, surrounding fuel type.

Future Fire Environment: Climate

- Low-elevation shrublands: fire maybe not as critical as land use change
- Temp/ precipitation not strongly correlated with high fire years in low elevation shrublands
- Extended droughts a major concern

Anticipating Change

- Next century expects dramatic changes in climate, land use, and population growth. All three will have dramatic impact on fire regimes. Relative importance depends on where in the state.
- Effective planning and action must accommodate this diversity
- Housing development patterns most important in central and southern coastal areas
- Potential for widespread shrubland conversion to weedy grasses (carbon loss, increased flammability, biodiversity loss, etc.)

Main Points

- Plan for change and complacency
- Chaparral and forests require different management
- Chaparral is threatened by too much fire
- Land use planning
- Reduce fire risk from the house out

Tanya Hoover - Have building standards that were implemented to address these issues been used as a pinpoint for the full range of data?

Mark Hartwig- The data is available and can be looked at from many angles.

Tanya Hoover- I am interested to see how this progresses. There are many tactics that can be taken to mitigate fire hazards.

Mark Hartwig- Policy makers must say it is important to create a county ordinance to implement fire resistant buildings.

Tanya Hoover- We have a good working relationship with our CVRA- building requirements etc. are on point to where when we are in Sacramento, we are most likely on the same page.

IX. FIRESCOPE Update

Jeff Bowman - Last meeting with the task force we had a brief discussion regarding updating the blue ribbon document. We put a lot of hard work into the document so that California would never repeat the issues and shortages that were made apparent during the 2003 fires. The last official update to the document was in 2008. The board of Firescope, allowed by the chair, put a subgroup together to ID the top issues that could be tackled in 2016. I know we are trying to make progress to say that we have finished 5-6 blue ribbon recommendations.

The plan is that each Fire Chief will follow up on action items through the commission recommendations. We need to identify the need and resolve the resource issue that was brought up earlier in the meeting. We have ID'd the top 7 blue ribbon recommendations and it was even extended to county fire chiefs as a cross reference. A fire chief has been assigned to each item that has been identified, and they will put a small group together to complete each item. Identifying funding for these items is also going to be key going forward if we are to see these issues through all the way. Daryl Osby will present the progress to the task force after he is informed at the FIRESCOPE Board meeting.

Meeting Summary and Action Items (*Mark Ghilarducci, Cal OES*)

Director Ghilarducci - Encouraged by the way that the task force is coming together. Is there another way that we can improve the task force, or is there an element to add to further create recommendations and action within this TF?

So much has happened and is planned to happen. What recommendations can we collaborate on to move forward to bolster capability, preparedness, and prevention capabilities? Blue Ribbon is a base that we can move from, are these still relevant? Can they give us a pathway to go down? This is a tremendous group and we look forward to the future.

Jeff Bowman - Do we need a land use planner in this body?

Tanya Hoover - It would be great to have a local component and OPR representative here in the TF to address local issues and land use.

Jeff Bowman - Items 34-38 in the blue ribbon commission document all involve Land Use, so it would be good to have a representative in the Task Force.

Tina Curry - Possibly someone from the American Planning Association (APA)

Director Ghilarducci - Great recommendation, thank you very much and keep up all the good work.

Adjourn @ approx. 2:50 PM

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